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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,793	11/02/2001	Axel K. Kloth	2001 P 16199 US	3205

7590 08/21/2006

SIEMENS CORPORATION
INFINEON TECHNOLOGIES NORTH AMERICA CORP.
INTELLECTUAL PROPERTY DEPT.
170 WOOD AVENUE SOUTH
ISELIN, NJ 08830

EXAMINER

BLOUNT, STEVEN

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 08/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

86

Office Action Summary	Application N .	Applicant(s)	
	10/052,793	KLOTH, AXEL K.	
	Examin r	Art Unit	
	Steven Blount	2616	

-- The MAILING DATE of this communication appears n the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3 - 8, 10 - 12, 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3 - 8, 10 - 12, 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5, 8, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicants admitted prior art (AAPA) in view of U.S. patent 6,078,532 to Rivers et al.

With regard to claim 1, AAPA teaches, starting on page 1 lines 10+ of the specification, using lookup tables in routers to lookup ports, said routing tables being stored in DRAM. AAPA also identifies a problem existing in the prior art wherein this routine introduces excessive unwanted latency. AAPA does not however teach a solution to this problem to comprise using both DRAM and SRAM in the lookup table.

This is taught in Rivers et al. See col 2 lines 10 – 20 and note that the col 2 lines 13 – 16 teach searching the entire SRAM.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have solved the problem existing in the prior art comprising latency in DRAM based router memories as stated in the AAPA, in light of the teachings of Rivers et al, in order to provide a method of routing data at speeds which make the said routers efficient and economical to use.

3. Claims 3 – 4, 6 – 7, 10 – 11, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicants admitted prior art (AAPA) in view of U.S. patent 6985483 to Rivers et al as applied above, and further in view of U.S. patent 6,154,746 to Berchtold et al.

AAPA/Rivers et al teach the invention as discussed above, but do not teach searching using bisection, or a tree search. This is taught in Berchtold et al. See col 15 lines 15+ and col 1 lines 30+.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have searched the data of AAPA/Rivers et al using bisection/tree search, in light of the teachings of Berchtold in order to provide one more method for speeding up the search of the data.

4. Claims 1, 5, 8, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicants admitted prior art (AAPA) in view of U.S. patent 5588130 to Fujishima et al.

AAPA teaches, starting on page 1 lines 10+ of the specification, using lookup tables in routers to lookup ports, said routing tables being stored in DRAM. AAPA also identifies a problem existing in the prior art wherein this routine introduces excessive unwanted latency. AAPA does not however teach a solution to this problem to comprise using both DRAM and SRAM in the lookup table.

Fujishima et al teach searching using SRAM/DRAM wherein a complete search of SRAM is made prior to searching DRAM. See col 8 lines 5+, the abstract, and Fujishima generally, and note that if there is not a “hit” in SRAM, DRAM is searched.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have solved the problem existing in the prior art comprising latency in DRAM based router memories as stated in the AAPA, in light of the teachings of Fujishima et al, in order to provide a method of routing data at speeds which make the said routers efficient and economical to use.

5. Claims 3 – 4, 6 – 7, 10 – 11, and 14 are rejected under 35 U.S.C. 103(a) as being

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unpatentable over the applicants admitted prior art (AAPA) in view of U.S. patent 6985483 to Rivers et al as applied above, and further in view of U.S. patent 6,154,746 to Berchtold et al.

AAPA/Fujishima et al teach the invention as discussed above, but do not teach searching using bisection, or a tree search. This is taught in Berchtold et al. See col 15 lines 15+ and col 1 lines 30+.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have searched the data of AAPA/Fujishima et al using bisection/tree search, in light of the teachings of Berchtold in order to provide one more method for speeding up the search of the data.

6. Applicants remarks are moot in view of the new grounds of rejection.

The examiner notes that with respect to Fujishima, the use of SRAM/DRAM in this manner is very old and well known in the art, and it would have been as obvious to apply it to the routing problem mentioned in AAPA as it would have been to apply it to the many other types of computationally intense problems where it has been used in the past, where offloading highly used data to a fast cache is beneficial to obtaining a fast and efficient solution.

One of ordinary skill in the art would have found it obvious to apply this known computer implementation to solving any kind of related matrix problem - including, in this case, finding the correct routing destination.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Blount whose telephone number is 703-305-0319. The examiner can normally be reached on M-F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To, can be reached at 571-272-7269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB

8/8/06


DORIS H. TO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600